REMARKS/ARGUMENTS

STATUS OF THE CLAIMS

Claims 1-41 are pending. Applicants respectfully request reexamination and

reconsideration of Claims 1-41 in light of the following remarks.

CLAIM REJECTIONS – 35 U.S.C. § 103

Independent Claims 1 and 16

Claims 1 and 16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 5,475,384 ("Manenti") in view of IEEE Standard No. 1451.2-1997 ("the IEEE Std").

Claims 1 and 16 require, among other things, "each transducer signature identifying a

transducer type," and "a processor...to identify the transducer type using the transducer

signatures."

As noted by the Examiner on page 5 of the Office action, Manenti does not teach or

suggest using a transducer signature to identify a transducer type, a processor that identifies the

transducer type using the transducer signature, or a processor that processes the environmental

characteristic using the transducer signature.

The IEEE Std does not cure the deficiencies of Manenti. The IEEE Std generally

describes a digital interface for connecting transducers to microprocessors and a transducer

electronic data sheet ("TEDS") format. The IEEE Std states as follows:

This standard defines a digital interface for connecting transducers to

microprocessors. It describes a TEDS and its data formats. It defines an electrical interface, read and write logic functions to access the TEDS, and a wide

variety of transducers. This standard does not specify signal conditioning, signal

conversion, or how the TEDS data is used in applications.

(IEEE Std, page 2, 1.1 Scope.)

More specifically, the IEEE Std teaches the use of a universal unique identification

(UUID), which is an identification field associated with each individual smart transducer

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interface module (STIM). The value of the UUID for each individual STIM is unique in the universe (i.e., each STIM that is sold has its own UUID). The UUID includes four subfields, namely a location field, a manufacture's field, a year field, and a time field. (IEEE Std, page 16, 3.3.9 Universal unique identification.) However, none of these four fields includes a broader category that identifies the type of transducer (e.g., pH, oxidation reduction potential, dissolved oxygen, etc.). If the UUID of the IEEE Std is the "transducer signature" of Claims 1 and 16, the UUID does not identify a transducer type. As a result, the IEEE Std does not teach or suggest "each transducer signature identifying a transducer type," or "a processor...to identify the transducer type using the transducer signatures."

Neither Manenti nor the IEEE Std, alone or in combination, teaches or suggests "each transducer signature identifying a transducer type," or "a processor...to identify the transducer type using the transducer signatures," as required by Claims 1 and 16. Accordingly, independent Claim 1, dependent Claims 2-15, independent Claim 16, and dependent Claims 17-28 are allowable.

Dependent Claims 2-15 and 17-28

Claims 2-15 and 17-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Manenti in view of the IEEE Std. Claims 2-15 depend from Claim 1 and Claims 17-28 depend from Claim 16, and are therefore allowable for the reasons set forth above with respect to Claims 1 and 16. Claims 2-15 and 17-28 specify additional patentable subject matter not specifically discussed herein.

Independent Claim 29

Claim 29 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Manenti in

view of the IEEE Std and in further view of U.S. Patent Application No. 2003/0187606

("Curry").

Independent Claim 29 requires, among other things, "conditioning the signal indicative of

the environmental characteristic using the processor with an adaptive firmware stored in the

transducer body and the processed signatures."

Applicants traverse the Examiner's statement on page 8 of the Office action that it would

have been obvious to modify Manenti to store transducer signatures on memory, as taught by the

IEEE Std. As discussed above with respect to Claims 1 and 16, the universal unique

identification (UUID) for each individual smart transducer interface module (STIM) taught by

the IEEE Std does not teach or suggest "transducer signatures" that identify a broader category

of the type of transducer.

As noted by the Examiner on page 8 of the Office action, Manenti does not teach or

suggest a method for conditioning the signal indicative of the environmental characteristic using

the processor with an adaptive firmware stored in the transducer body and the processed

signatures. Applicants respectfully submit that the IEEE Std also does not teach or suggest this

limitation.

Curry does not cure the deficiencies of Manenti and the IEEE Std. Curry teaches a heat

production (BTU) meter 18 including a printed circuit board 11 that contains "all the necessary

electronic circuitry for control, measurement, data processing, firmware, data storage, and

communications to external devices." (Curry, paragraph [0036].) Applicants respectfully

traverse the Examiner's statement on page 9 of the Office action that it would have been obvious

to modify Manenti to condition the environmental characteristic using the processor with

firmware, as taught by Curry. The only type of meter taught by Curry is a heat production

(BTU) meter 18. As a result, there is no teaching, suggestion, or motivation to alter Curry to

condition the signal coming from the BTU meter 18 according to another environmental

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characteristic using adaptive firmware, because the only environmental characteristic that will

ever be measured by the BTU meter 18 is heat production.

None of Manenti, the IEEE Std, or Curry, either alone or in combination, teaches or

suggests "conditioning the signal indicative of the environmental characteristic using the

processor with an adaptive firmware stored in the transducer body and the processed signatures,"

as required by Claim 29. Accordingly, independent Claim 29 and dependent Claims 30-41 are

allowable.

Dependent Claims 30-41

Claims 30-41 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over

Manenti in view of the IEEE Std and further in view of Curry. Claims 30-41 depend from Claim

29, and are therefore allowable for the reasons set forth above with respect to Claim 29. Claims

30-41 specify additional patentable subject matter not specifically discussed herein.

CONCLUSION

In light of the above remarks, Applicants respectfully request reconsideration and

allowance of Claims 1-41.

Respectfully submitted, Paye Syn Dayluf

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